

DIVERSION

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 362



DIVERSION

A channel constructed across the slope with a supporting ridge on the lower side.

PRACTICE INFORMATION

This practice applies to all types of diversions except floodwater diversions (400) and diversion dams (348). The general purpose of this type of diversion is to divert excess water from one area for use or safe disposal in other areas.

This practice applies to sites where:

1. Runoff damages cropland, grazing land, farmsteads, feedlots, or conservation practices such as terraces or stripcropping.
2. Surface flow and/or shallow subsurface flow caused by seepage is causing damage on sloping cropland.
3. Runoff is excessive and available for use on nearby sites.
4. A diversion is required as part of a pollution abatement system.
5. A diversion is required to control erosion and runoff on urban or developing areas and construction or mining sites.

The channel may be parabolic, V-shaped, or trapezoidal. The channel grades may be uniform or variable as long as the velocity is nonerosive considering the soil and planned vegetation or lining. The location of the diversion shall be determined by outlet conditions, topography, land use, farming operations, and soil type. Diversion layout in a cultivated field should be as compatible as practical with modern farm equipment.

Diversions must have a safe and stable outlet with adequate capacity. The outlet may be a grassed waterway, paved area, vegetated area, a grade stabilization structure, a stable watercourse, underground outlet, or a combination of these structures. The outlet must be able to convey the runoff to a point where outflow will not cause damage.

If the outlet is a vegetated area, the vegetation must be established before constructing the diversion.

Additional information including design criteria and specifications are on file in the local NRCS Field Office Technical Guide.

The following pages contain the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: recorded in Microsoft word 6.0 - use tabs to change cells/fields

STATE	Iowa	FIELD OFFICE		DATE	12/5/96
PRACTICE:			NOTES:		
RESOURCE: SOIL			Help Message: Click on form field for choice lists. Tab key to move around. "N/A" is the default.		
RESOURCE CONCERN: EROSION					
RESOURCE INDICATORS			PHYSICAL EFFECTS		
SHEET AND RILL			slight reduction in sheet and rill erosion		
WIND			insignificant		
EPHEMERAL GULLY			significant reduction in ephemeral gully erosion		
CLASSIC GULLY			moderate reduction in classic gully erosion		
STREAMBANK			slight reduction in streambank erosion		
IRRIGATION INDUCED			situational concerning irrigation induced erosion		
SOIL MASS MOVEMENT			moderate reduction in mass movement of soil		
ROADBANK/CONSTRUCTION			moderate decrease in roadbank construction erosion		
OTHER					
RESOURCE CONCERN: SOIL CONDITION					
SOIL TILTH			insignificant		
SOIL COMPACTION			insignificant		
SOIL CONTAMINATION					
• SALTS			insignificant		
• ORGANICS			slight decrease in organic contaminates		
• FERTILIZERS			slight reduction in contamination from fertilizer		
• PESTICIDES			slight reduction in pesticide contam./soil		
• OTHER					
DEPOSITION/DAMAGE					
• ONSITE			significant reduction/onsite deposition damage		
• OFFSITE			significant decrease/offsite deposition damage		
DEPOSITION/SAFETY					
• ONSITE			significantly improve onsite safety/deposition		
• OFFSITE			sign. improve offsite safety hazard/deposition		
OTHER					
RESOURCE: WATER					
RESOURCE CONCERN: WATER QUANTITY					
SEEPS			moderate reduction in seepage hazard		
RUNOFF/FLOODING			sign. decrease in runoff/flooding		
EXCESS SUBSURFACE WATER			insignificant		
INADEQUATE OUTLETS			slight increase in H2O outlet concern		
WATER MGT. IRRIGATION					
• SURFACE			situational concerning IWM, surface		
• SPRINKLER			slight improvement in irrigation efficiency		
WATER MGT. NON-IRRIGATED			slight improvement in moisture use		
RESTRICTED FLOW CAPACITY (H2O convey.)					
• ONSITE			moderate improvement in onsite drainage		
• OFFSITE			moderate improvement in offsite drainage		
RESTRICTED STORAGE			sign. reduction in sedimentation of H2O storage		
OTHER					

RESOURCE: WATER	
RESOURCE CONCERN: WATER QUALITY	
RESOURCE INDICATORS	PHYSICAL EFFECTS
GROUNDWATER CONTAMINANTS	
• PESTICIDES	slight potential increase/GWater contam./pesticide
• NUTRIENTS AND ORGANICS	slight poten. increase in GWater contam./nutr,org.
• SALINITY	sign. poten. increase/GWater contam./salinity
• HEAVY METALS	insignificant
• PATHOGENS	insignificant
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	slight reduction in SWater contam./pesticides
• NUTRIENTS AND ORGANICS	slight reduction in SWater contam./nutr.,organics
• SUSPENDED SEDIMENTS	slight reduction in SWater contam./susp. sedi.
• LOW DISSOLVED OXYGEN	moderate reduction in SWater contam./low oxygen
• SALINITY	insignificant
• HEAVY METALS	slight reduction in SWater contam./heavy metals
• WATER TEMPERATURE	insignificant
• PATHOGENS	slight decrease in SWater contam./pathegens
AQUATIC HABITAT SUITABILITY	moderate improvement in Aqua. Hab. Suit.
OTHER	
RESOURCE: AIR	
RESOURCE CONCERN: AIR QUALITY	
AIRBORNE SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	insignificant
• OFFSITE SAFETY	insignificant
• ONSITE STRUCT. PROBLEMS	insignificant
• OFFSITE STRUCT. PROBLEMS	insignificant
• ONSITE HEALTH	insignificant
• OFFSITE HEALTH	insignificant
AIRBORNE SEDIMENT CAUSING CONVEYANCE PROBLEMS	insignificant
AIRBORNE CHEMICAL DRIFT	N/A
AIRBORNE ODORS	N/A
FUNGI, MOLDS, AND POLLEN	N/A
OTHER	
RESOURCE CONCERN: AIR CONDITION	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	insignificant
HUMIDITY	N/A
OTHER	

[illegible]

RESOURCE: HUMAN	
RESOURCE CONCERN: SOCIAL CONSIDERATIONS	
RESOURCE INDICATORS	PHYSICAL EFFECTS
PUBLIC HEALTH AND SAFETY	mod. improvement in public health & safety
PRIVATE/PUBLIC VALUES	mod. improvement in private/public values
CLIENT CHARACTERISTICS	N/A
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: CULTURAL CONSIDERATIONS	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	situational regarding cultural resources
SIGNIFICANCE OF CULTURAL RESOURCES	situational regarding cultural resources
MITIGATION OF NEGATIVE CULTURAL RES. IMPACTS	situational regarding cultural resources
OTHER	